

REMARKS

Claims 1-3 and 5-34 are pending. Claims 8 and 18 are allowed. Claims 1, 5-7, 12-17, 20, 23, 29-30 and 34 have been amended. Claim 4 has been canceled. In view of the following, all of the claims are in condition for allowance. If, after considering this response, the Examiner does not agree that all of the claims are allowable, she is requested to schedule a teleconference with the Applicant's attorney to further the prosecution of the application.

Rejection of claims 1-2, 6-7, 20-23 and 29-31 under §102(b) as being anticipated by Tuttle et al. (US 6,108,151)

Claim 1

Claim 1, as amended, recites a processor coupled to the servo channel and operable to detect a first spin-up wedge associated with a first one of the servo wedges and then to detect the first servo wedge by detecting a preamble of the first servo wedge using a trigonometric identity while the disk is attaining or after the disk attains an operating speed and before the servo channel detects any other servo wedge.

For example, referring, e.g., to FIGS. 7, 11 and 12 and the corresponding disclosure of the present application, a processor 40 detects a spin-up wedge 152 and then a servo wedge 154 by detecting a preamble 74 of the servo wedge using a trigonometric identity $(Y\sin\alpha_1)^2 + (Y\cos\alpha_1)^2 = Y^2$. More specifically, the processor 40 stores a number of consecutive even 90a-90c and odd 91a-91c samples of the preamble sinusoid, and then sums each consecutive pair of even samples and each consecutive pair of odd samples (paragraph 46). If the even E1 and odd O1 sums equal zero, then the processor 40 uses the above trigonometric identity to calculate an average even sample $AE = Y\cos\alpha_1$ and an average odd sample $AO = Y\sin\alpha_1$, and then calculates an amplitude $AMP = \sqrt{AE^2 + AO^2}$ (paragraph 47). If the value of AMP is greater than a predetermined threshold value Threshold_high, then the processor 40 has detected the preamble 74 (paragraph 48). In this way, detecting both the spin-up wedge 152 and the servo wedge 154 on disk spin up is a more robust technique for

determining the head position on disk spin up than merely detecting the spin-up wedge or the servo wedge, but not both.

Tuttle, on the other hand, does not disclose a processor coupled to the servo channel and operable to detect a first spin-up wedge associated with a first one of the servo wedges and then to detect the first servo wedge by detecting a preamble of the first servo wedge using a trigonometric identity while the disk is attaining or after the disk attains an operating speed and before the servo channel detects any other servo wedge. In fact, after reviewing Tuttle in its entirety, the Applicant's attorney is unable to find any mention of a processor using a trigonometric identity to detect a preamble 5 of a servo wedge 17. Therefore, Tuttle does not satisfy the limitations of claim 1.

Claim 20

Claim 20, as amended, recites a processor coupled to the servo channel and operable to detect first and second portions of one of the servo wedges while the disk is attaining or after the disk attains an operating speed and before the servo channel recovers servo data from any other servo wedge, the processor operable to detect the second portion using a trigonometric identity.

Claim 20 is patentable for reasons similar to those recited above in support of the patentability of claim 1.

Claims 23 and 30

Claims 23 and 30, as amended, are patentable for reasons similar to those recited above in support of the patentability of claim 1.

Claim 29

Claim 29, as amended, is patentable for reasons similar to those recited above in support of the patentability of claim 20.

Claims 2, 6-7, 21-22 and 31

Claims 2, 4, 6-7, 21-22 and 31 are patentable by virtue of their respective dependencies from independent claims 1, 20 and 30.

Rejection of claims 3, 5, 9-17, 24-28 and 32-34 under 103(a) as being unpatentable over Tuttle et al. in view of Leis et al. (US 5,036,408)

Claims 3, 5, 9-17, 24-28 and 32-34 are patentable by virtue of their respective dependencies from independent claims 1, 23 and 30.

Rejection of claim 19 under 103(a) as being unpatentable over Tuttle et al. in view of Patapoutian et al. (US 5,661,760)

Claim 19 is patentable by virtue of its dependency from independent claim 1.

CONCLUSION

In light of the foregoing remarks, claims 1-3 and 5-34 are in condition for allowance, which is respectfully requested.

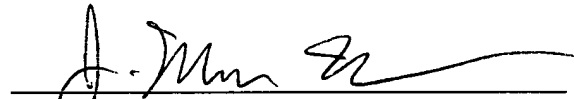
In the event additional fees are due as a result of this amendment, you are hereby authorized to charge such payment to Deposit Account No. 07-1897.

If, after considering this response, the Examiner does not agree that the referenced claims are allowable, then it is respectfully requested that the Examiner contact the Applicants' attorney, Bryan Santarelli or J. Mark Han, at (425) 455-5575.

DATED this 8th day of May, 2006.

Respectfully submitted,

GRAYBEAL JACKSON HALEY LLP

A handwritten signature in black ink, appearing to read 'J. Mark Han', is written over a horizontal line.

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